

**REMARKS**

An excess claim fee payment letter is submitted herewith for three (3) excess independent claims.

Claims 1, 4-7, 11 and 12 are all the claims presently pending in the application. Claim 1 has been amended to more particularly define the invention. Claims 11 and 12 have been added to claim additional features of the invention.

It is noted that the claim amendments are made only for more particularly pointing out the invention, and not for distinguishing the invention over the prior art, narrowing the claims or for any statutory requirements of patentability. Further, Applicant specifically states that no amendment to any claim herein should be construed as a disclaimer of any interest in or right to an equivalent of any element or feature of the amended claim.

Applicant gratefully acknowledges that claims 5-7 would be allowable if rewritten in independent form. Claims 5-7 have been rewritten in independent form and, therefore, are allowable. However, Applicant respectfully submits that all of the pending claims are allowable.

Claims 1-4 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Saneshige, et al. (JP No. 406022519A).

This rejection is respectfully traversed in the following discussion.

**I. THE CLAIMED INVENTION**

The claimed invention is directed to a stepping motor including:  
a rotor including a permanent magnet magnetized in multipoles;  
a plurality of coils surrounding the rotor and wound around a radius direction of

the rotor;

a cylindrical supporter for supporting the plurality of coils including a flexible board and an insulating film having a flexibility; and

a casing for surrounding the permanent magnet, the plurality of coils and the supporter and fixed to the supporter,

wherein the flexible board includes a wiring pattern one end portion of which is electrically connected to the coil and includes a terminal portion at which another end portion of the wiring pattern aggregates.

It is conventional to have a stepping motor that has the features described above, with the exception of a supporter which includes a terminal portion at which another end portion of the wiring pattern aggregates.

The claimed invention, on the other hand, includes a supporter which includes a simpler design, a terminal portion at which another end portion of the wiring pattern aggregates.

## **II. THE PRIOR ART REFERENCE**

### **The Saneshige, et al. Reference**

The Examiner alleges that Saneshige et al. anticipates the claimed invention. Applicant submits, however, that there are elements of the claimed invention which are neither taught nor suggested by Saneshige et al.

Saneshige et al. discloses the conventional stepping motor described above, but fails to disclose or suggest a wiring pattern one end portion of which is electrically connected to the coil and includes a terminal portion at which another end portion of the wiring pattern aggregates.

Furthermore, Saneshige et al. fails to disclose or suggest the feature of claim 4, namely, the terminal portion being projected to outside of the casing. Although the Examiner states generally that Saneshige et al. discloses all of the features of claims 3 (now in claim 1) and 4, he does not specifically point to disclosures in Saneshige et al. of the features of these claims.

New claim 11 is like allowable claim 5 but does not require a surface of the strip-like shape of the soft magnetic material to be insulatingly covered. Saneshige et al. does not disclose all of the limitations of claim 11, even without the insulatingly covered feature.

New claim 12 is like allowable claim 6 but does not require a pair of circular plate members respectively connected to end portions of the permanent magnet for supporting the magnetic pole teeth, and wherein the magnetic pole teeth are alternately formed on one of the circular plate members and on the other of the circular plate members. Instead, claim 12 merely requires includes the plurality of magnetic pole teeth to be connected to the permanent magnet, wherein the magnetic pole teeth are alternately connected to one end of the permanent magnet and to the other end of the permanent magnet. A stepping motor having this feature is not disclosed in or suggested by Saneshige et al.

### III. FORMAL MATTERS AND CONCLUSION

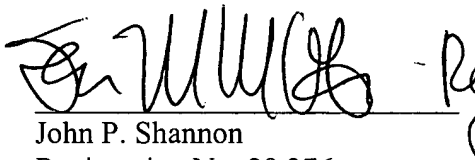
Minor errors have been corrected in the specification.

In view of the foregoing, Applicant submits that claims 1, 4-7, and 11-18, all the claims presently pending in the application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview. The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Attorney's Deposit Account No. 50-0481.

Respectfully Submitted,

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